

MATHS IN SPACE

Mathematics has been used extensively in space exploration. But it is also present in the physics that holds the planets in their orbits. Hidden Figures (2016) is a movie worth watching, which tells the story of the mathematicians who worked behind the scenes to allow the first humans to walk on the moon.

Below are some ideas for students to explore. Please note, they are not limited to those age groups.

Students should investigate the mathematics involved and write up a mathematical report with their findings. Here is a link for instructions on how to write up a report.

<http://mastering-mathematics.com/webpages/working-mathematically/report.html>

STAGE 4 – YEARS 7 AND 8

- Origami of Space Shuttle Deployment
- Large measures of speed, distance – Measurement
- Polar Coordinates – Algebra

STAGE 5 – YEARS 9 AND 10

- Position of objects in 3D Space – Geometry
- Elliptical orbits – Non-Linear Relationships
- Kepler's Third Law – Algebra, Geometry, Measurement
- Projectiles – Algebra
- Square Kilometre Array - Logarithms

NASA also has a fantastic website full of maths related activities:

https://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/YOSS_Real-World_Math.html

